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Papers on the Flora of Alaska—I.
The Genus *Cicuta*

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The species of *Cicuta* are of great importance on account of their very poisonous properties. Losses of cattle directly attributed to poisoning by *C. douglasii* (DC.) Coult. & Rose have occurred in southeastern Alaska. There have been rumors of losses elsewhere.

In a recent study, Mathias and Constance (1) have reduced the American species of the genus to seven. Of these, three occur in Alaska. The following key covers these three species:

Fruit longer than wide, leaflets 2-4 times as long as wide.

C. maculata

Fruit shorter than wide, leaflets 5-10 times as long as wide.

C. mackenziana

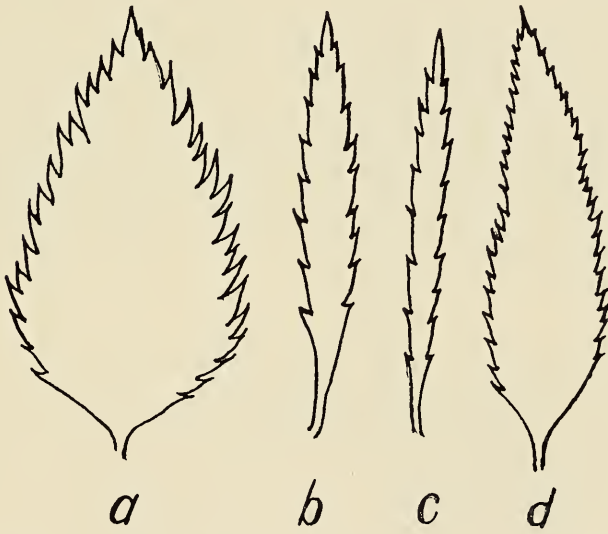
Fruit about equal in length and width, leaflets $1\frac{3}{4}$ - $2\frac{1}{2}$ times as long as wide.

C. douglasii

This is probably the first report of *C. maculata* L. from Alaska, although *C. virosa* L. reported by Porsild (2) from Hot Springs on the Tanana River undoubtedly was this species. The author first collected it at Knik on Knik Arm of Cook Inlet in 1931 (1382). In 1935 it was collected at Circle Hot Springs (2616), as again in 1941 (7560). A collection at Hyder in 1939 (5501) is rather immature but seems to be this species. A visit to Manly Hot Springs (also known as Tanana Hot Springs) in 1941 revealed its presence

there (7075). It is to be noted that the most northerly stations are at hot springs where other more southerly species of plants also occur.

Cicuta mackenziana Raup is the most widely distributed member of the genus in the territory. The author first collected it at Matanuska in 1922. The following collections have since been made: Matanuska (1103); College, near Fairbanks (1258); Circle, on Yukon River (2595); mile 312, Richardson Highway (2686); Willow Creek, mile 92, Richardson Highway; Valdez (2888); Unalakleet (5106); Eklutna (6940); Takotna (7352); Talkeetna (7580). An immature specimen collected at Hope (6695) seems to belong here.



a. Leaflet of *C. douglasii*. b and c. Leaflets of *C. mackenziana*. d. Leaflet of *C. maculata*. All drawn by Dr. Ada Hayden.

Cicuta douglasii (DC.) Coult. & Rose seems to be confined to southeastern Alaska. Collections were made at Lemon Creek (784) and at Mendenhall (783), both near Juneau; Haines (1570); Skagway (1733); and Echo Cove, Lynn Canal (6034).

All specimens cited were collected by the author and are in his herbarium now deposited in Iowa State College at Ames.

So far as their occurrence in Alaska is concerned, the species are very distinct and can be readily separated by vegetative characters alone. *Cicuta douglasii* and *Cicuta maculata* grow up to 2 meters tall and *Cicuta mackenzieana* up to $1\frac{1}{2}$ meters. All have bipinnate leaves which often appear to be ternate-pinnate. In *C. douglasii* the leaflets are lanceolate, 1–5 cm. wide \times $2\frac{1}{2}$ –9 cm. long, serrate to doubly serrate or even incised and with sharp teeth. In *C. maculata* the leaflets are more narrowly lanceolate, .8–3 cm. \times 3–9 cm., rather evenly serrate with sharp, mostly outward pointed teeth. The leaflets of *C. mackenzieana* are narrowly lanceolate to linear, .2–2 cm. \times 2–10 cm., with rather remote, sharp, forward-pointing teeth, these being rather small on the more narrow leaflets. Fruits of *C. douglasii* are deeply grooved, about $2\frac{3}{4}$ mm. long and wide. *C. mackenzieana* also has deeply grooved fruits which are about $2\frac{1}{4}$ mm. wide \times 2 mm. long. In *C. maculata* the fruit is not grooved, the space being filled by thick corky ribs. The fruit measures about $2\frac{3}{4}$ mm. wide \times $3\frac{1}{4}$ mm. long. All the species are found growing in shallow water, sometimes ascending into mud, but never in well drained situations. This habitat is quite different from that of other tall growing members of the same family, which are always found on better drained soils.

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